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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/582,512      06/27/00      FEICHTMEIER

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IM22/0426  
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EXAMINER

MCLENDON, S

ART UNIT

PAPER NUMBER

1711

DATE MAILED:

04/26/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/582,512

Applicant(s)

FEICHTMEIER ET AL.

Examiner

Sanza L McClendon

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1 and 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 5 recites the limitation "photopolymerizable precursor" in line 2, "a photopolymerizable prepolymerized mixture", in lines 3-4, and "compounds selected from epoxy monomers..." in lines 6-9. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not have any of these limitations.
4. Claim 6 is rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the additional acrylate component is the same as or different than the at least one acrylic ester of a non-tertiary alcohol.
5. Claim 7 recites the limitation "polyester" in line 3, "compounds selected from epoxy monomer....". There is insufficient antecedent basis for this limitation in the claim.
6. The term "obtainable" in claims 5 and 7 is a relative term, which renders the claim indefinite. The term "obtainable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear how the thermosettable adhesive is able to be obtainable by the instant claim.
7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear in claim 1 if applicant is intending to claim hydroxides, Al, Mg, and Zr, and hydroxides of Al, Mg, and Zr, or combinations, or if applicant is intending to claim

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hydroxides and hydroxides of Al, Mg, and Zr, as suggested by applicant's disclosure—see page 15, line 20.

8. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation hydroxides, and the claim also recites hydroxides of Al, Mg, and Zr which is the narrower statement of the range/limitation.

9. Claim 1 is rejected for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if applicant is intending to claim all hydroxides (organic and inorganic). Is applicant intending to claim any compound that has an (OH) containing radical, such as alcohols, hydroxyl containing polymers, monomers, oligomers, acids, metal oxides, and etc? Is applicant intending to claim only Al, Mg, and Zr or Al, Mg, or Zr containing compounds, such as talc [Mg<sub>3</sub>Si<sub>4</sub>O<sub>10</sub> (OH)<sub>2</sub>] and bentonite (aluminum silicate)?

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1 – 6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitano et al (US 5,086,088) in view of Siga et al (4,778,253).

Kitano et al teaches epoxy-acrylate blend pressure sensitive thermosetting adhesives. The adhesives comprise 30 to 80% of a photopolymerizable prepolymeric or monomeric syrup containing an acrylic ester and a polar copolymerizable monomer, 20 to 60% by weight of an epoxy resin, from 0.5 to 10% of a heat activatable hardener for the epoxy, from 0.01 to 5% of a photoinitiator, and from 0 to 5% of a photocrosslinking agent.

The photopolymerizable prepolymeric or monomeric syrup contains an acrylic ester and a polar copolymerizable monomer. The acrylic ester is a mono-functional acrylic ester of a non-tertiary alcohol having from 4 to 12 carbon atoms in the alcohol compound—see column 4, lines 33-41. The copolymerizable monomer can be chosen from nitrogen containing monomers—see column 4, lines 44-51. The epoxy resin can be selected from compounds comprising at least two epoxy groups per molecule. In addition, Kitano et al teaches that the epoxy compound can be in a mixture with epoxy compounds with no photopolymerizable groups. The preferred crosslinking agents are multi-functional acrylates, such as 1,6-hexandiol diacrylate. This reads on claim 6. Additionally, the pressure sensitive adhesive composition can comprise fillers, such as fumed silica in amounts from 2 to 15 parts per hundred.

Kitano et al teaches that the adhesive can be coated onto a flexible carrier web that is transparent to ultraviolet radiation and polymerized in an inert atmosphere. The adhesive of Kitano et al can be used in sealing and bonding of roof molding parts—see column 7, lines 67-68.

Kitano et al does not expressly teach the use of 0.5 to 50-wt% of hydroxides or hydroxides of Al, Mg, or Zr.

Siga et al teaches an adhesive comprising an ultraviolet curing adhesive containing 0.5 to 20% by weight of filler. Siga et al teaches that the adhesive can be selected from epoxy acrylate resin or epoxy-modified resins—see column 2, lines 18-22 and claim 2. Siga et al teaches that the fillers are inorganic fillers and can be compounds, such as talc, alumina, aluminum hydroxide, and aluminum powder.

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Kitano et al and Siga et al are analogous art because they are from the same field of endeavor that is the art of adhesive bonding of substrates using filled adhesive compositions.

Therefore, one of ordinary skill in the art would have found it obvious to use fillers, such as talc, alumina, aluminum hydroxide, and aluminum powder, as suggested by Siga et al, in pressure sensitive adhesive taught by Kitano et al. The motivation would have been to obtain with reasonable success a thermosettable pressure sensitive adhesive with reduced water absorption properties, as suggested by Siga et al (column 1, lines 60-end), in the absence of unexpected results.

12. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karim et al (EP 0 798 354 A1) in view of Siga et al (4,778,253).

Karim et al teaches a thermosettable adhesive composition. Said composition comprises 30 to 65% by weight of a photopolymerized prepolymeric mixture comprising an acrylic ester of a non-tertiary alcohol and at least one reinforcing copolymerizable monomer, from 10 to 65% of a epoxy resin, from 0.2 to 15% of a polymer having units found in formula I, from 0.1 to 10% of a heat activatable epoxy hardening agent, and from 0.005 to 3% of a photoinitiator.

The polymer having units found in formula I are vinyl ester polymers, such as vinyl acetate, or can be polyesters, such as polycaprolactones—see page 6, lines 40-45. In addition, Karim et al teaches the use of crosslinking agents, such as 1,6-heandiol diacrylate, trimethylolpropane triacrylate, and others see page 10, lines 2-4. Additionally, the composition can comprise fillers in amounts from 0.1 to 10-wt%.

Karim et al teaches that the adhesives can be coating onto a flexible carrier with is transparent to ultraviolet light and polymerized in an inert atmosphere for use in bonding and sealing applications.

Karim et al does not expressly teach fillers such as hydroxides or hydroxides of Al, Mg, or Zr.

Siga et al teaches an adhesive comprising an ultraviolet curing adhesive containing 0.5 to 20% by weight of filler. Siga et al teaches that the adhesive can be selected from epoxy acrylate resin or epoxy-modified resins—see column 2, lines 18-22 and claim 2. Siga et al teaches that the fillers are inorganic fillers and can be compounds, such as talc, alumina, aluminum hydroxide, and aluminum powder.

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Karim et al and Siga et al are analogous art because they are from the same field of endeavor that is the art of adhesive bonding of substrates using filled adhesive compositions.

Therefore, one of ordinary skill in the art would have found it obvious to use fillers, such as talc, alumina, aluminum hydroxide, and aluminum powder, as suggested by Siga et al, in pressure sensitive adhesive taught by Karim et al. The motivation would have been to obtain with reasonable success a thermosettable pressure sensitive adhesive with reduced water absorption properties, as suggested by Siga et al (column 1, lines 60-end), in the absence of unexpected results.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L McClendon whose telephone number is (703) 305-0505. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax telephone numbers for the organization where this application or proceeding is assigned are (703) 872-9645 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0657.

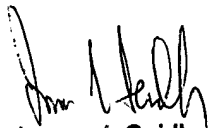
Sanza L McClendon

Examiner

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Smc

March 25, 2001



James J. Seidleck  
Supervisory Patent Examiner  
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